Propriedades mixing para dinâmicas genéricas e robustas

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Resumo

The so-called "critical circle maps" are orientation-preserving smooth circle homeomorphisms having a non-flat critical point (they belong to the boundary of the C^3 diffeomorphisms).

The "Rigidity Conjecture" for critical circle maps with irrational rotation number was formulated in the early eighties, after several works of Feigenbaum, Kadanoff, Lanford, Rand and Shenker among others, and it was proved to be true in the real-analytic category by de Faria-de Melo 2000, Yampolsky 2003 and Khanin-Teplinsky 2007.

On a joint work with Welington de Melo (IMPA), we proved the rigidity conjecture for C^3 critical circle maps with irrational rotation number of bounded type (arXiv:1303.3470).

Recently, we were able to get rid of the bounded combinatorics condition, thus extending the rigidity to any irrational rotation number: inside each topological class, the exponent of the critical point is the unique invariant of the smooth conjugacy classes.

Joint work with Marco Martens (Stony Brook, NY) and Welington de Melo.